

line 33, delete "reference" and insert therefor

--Reference--;

Page 17, line 2, delete "genoma" and insert therefor

-- genome --;

line 3, after "Finally" insert -- , --;

line 6, after "Particularly" insert -- , --;

line 10, after "defined" delete ", of a";

Page 20, line 3, after "virus" insert -- , which has been designated Human Immunodeficiency Virus Type 1 (HIV-1) --.

IN THE CLAIMS:

Please cancel claims 1-3.

Please add the following claims:

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~~--13.//~~ A cloned DNA sequence of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA is free of particles of said virus and the DNA contains at least a portion of the sequence:

241
CTAGC

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250	260	270	280	290	300
GGAGGCTAGA	AGGAGAGAGA	TGGGTGCCAG	AGCGTCAGTA	TTAAGCGGGG	GAGATTAGA
310	320	330	340	350	360
TCGATCGGAA	AAAATTCCGT	TAAGGCCAGG	GGCAAAGAAA	AAATATAAAT	TAAAACATAT

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Cont

370	380	390	400	410	420
AGTATGGGCA	AGCAGGGAGC	TAGAACGATT	CGCTGTTAAT	CCTGGCCTGT	TAGAAACATC
430	440	450	460	470	480
AGAAGGCTGT	AGACAAATAC	TGGGACAGCT	ACAACCATCC	CTTCAGACAG	GATCAGAAGA
490	500	510	520	530	540
ACTTAGATCA	TTATATAATA	CAGTAGCAAC	CCTCTATTGT	GTGCATCAAA	GGATAGAGAT
550	560	570	580	590	600
AAAAGACACC	AAGGAAGCTT	TAGACAAGAT	AGAGGAAGAG	CAAAACAAAA	GTAAGAAAAA
610	620	630	640	650	660
AGCACAGCAA	GCAGCAGCTG	ACACAGGACA	CAGCAGCCAG	GTCAGCCAAA	ATTACCCTAT
670	680	690	700	710	720
AGTGCAGAAC	ATCCAGGGGC	AAATGGTACA	TCAGGCCATA	TCACCTAGAA	CTTTAAATGC
730	740	750	760	770	780
ATGGGTAAAA	GTAGTAGAAG	AGAAGGCTTT	CAGCCCAGAA	GTGATACCCA	TGTTTTCAGC
790	800	810	820	830	840
ATTATCAGAA	GGAGCCACCC	CACAAGATTT	AAACACCATG	CTAAACACAG	TGGGGGGACA
850	860	870	880	890	900
TCAAGCAGCC	ATGCAATGT	TAAAAGAGAC	CATCAATGAG	GAACCTGCAG	AATGGGATAG
910	920	930	940	950	960
AGTGCATCCA	GTGCATGCAG	GGCCTATTGC	ACCAGGCCAG	ATGAGAGAAC	CAAGGGGAAG
970	980	990	1000	1010	1020
TGACATAGCA	GGAAC TACTA	GTACCCTTCA	GGAACAAATA	GGATGGATGA	CAAATAATCC
1030	1040	1050	1060	1070	1080
ACCTATCCCA	GTAGGAGAAA	TTTATAAAAG	ATGGATAATC	CTGGGATTAA	ATAAAATAGT
1090	1100	1110	1120	1130	1140

AATAATGTAT AGCCCTACCA GCATTCTGGA CATAAGACAA GGACCAAAAAG AACCCCTTTAG
 1150 1160 1170 1180 1190 1200
 AGACTATGTA GACCGGTTCT ATAAACTCT AAGAGCCGAG CAAGCTTCAC AGGAGGTAAA
 1210 1220 1230 1240 1250 1260
 AATTTGGATG ACAGAAACCT TGTGGTCCA AATGCGAAC CCAGATTGTA AGACTATTTT
 1270 1280 1290 1300 1310 1320
 AAAAGCATTG GGACCAGCAG CTACACTAGA AGAAATCATG ACAGCATGTC AGGCAGTGGC
 1330 1340 1350 1360 1370 1380
 AGGACCCGGC CATAAGGCAA GAGTTTTCCT TGAAGCAATG AGCCAAGTAA CAAATTCAGC
 1390 1400 1410 1420 1430 1440
 TACCATAATG ATGCAAAGAG GCAATTTTAG GAACCAAAGA AAGATTGTTA AGTGTTCCTA
 1450 1460 1470 1480 1490 1500
 TTGTGGCAAA GAAGGGCACA TAGCCAGAAA TTGCAGGGCC CCTAGGAAAA AGGGCTGTTG
 1510 1520 1530 1540 1550 1560
 GAAATGTGGA AAGGAAGGAC ACCAAATGAA AGATTGTACT GAGAGACAGG CTAATTTTTT
 1570 1580 1590 1600 1610 1620
 AGGGAAGATC TGGCCTTCCT ACAAGGGAAG GCCAGGGAAT TTTCTTCAGA GCAGACCAGA
 1630 1640 1650 1660 1670 1680
 GCCAACAGCC CCACCAGAAG AGAGCTTCAG GTCTGGGGTA GAGACAACAA CTCCTCTCA
 1690 1700 1710 1720 1730 1740
 GAAGCAGGAG CCGATAGACA AGGAACTGTA TCCTTTAACT TCCCTCAGAT CACTCTTTGG
 1750
 CAACGACCCC TCGTCACAA

57
 Cont

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~~12~~ A DNA sequence as claimed in claim ~~13~~, wherein the DNA has the sequence:

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cont

260	270	280	290	300
A	TGGGTGCGAG	AGCGTCAGTA	TTAAGCGGGG	GAGAATTAGA
310	320	330	340	350
TCGATCGGAA	AAAATTCGGT	TAAGGCCAGG	GGGAAAGAAA	AAATATAAAT
360	370	380	390	400
TAAAACATAT	AGTATGGGCA	AGCAGGGAGC	TAGAACGATT	CGCTGTTAAT
410	420	430	440	450
CCTGGCCTGT	TAGAAACATC	AGAAGGCTGT	AGACAAATAC	TGGGACAGCT
460	470	480	490	500
CTTCAGACAG	GATCAGAAGA	ACTTAGATCA	TTATATAATA	CAGTAGCAAC
510	520	530	540	550
CCTCTATTGT	GTGCATCAAA	GGATAGAGA	AAAAGACACC	AAGGAACCTT
560	570	580	590	600
TAGACAAGAT	AGAGGAAGAG	CAAAACAAAA	GTAAGAAAAA	AGCACAGCAA
610	620	630	640	650
GCAGCAGCTG	ACACAGGACA	CAGCAGCCAG	GTCAGCCAAA	ATTACCCTAT
660	670	680	690	700
AGTGCAGAAC	ATCCAGGGGC	AAATGGTACA	TCAGGCCATA	TCACCTAGAA
710	720	730	740	750
CTTTAAATGC	ATGGGTAAAA	GTAGTAGAAG	AGAAGGCTTT	CAGCCCAGAA
760	770	780	790	800
GTGATACCCA	TGTTTTCAGC	ATTATCAGAA	GGAGCCACCC	CACAAGATTT
810	820	830	840	850
AAACACCATG	CTAAACACAG	TGGGGGGACA	TCAAGCAGCC	ATGCCAAATGT
860	870	880	890	900
CATCAATGAG	GAACCTGCAG	AATGGGATAG	AGTGCATCCA	GTGCATGCAG
910	920	930	940	950
ACCAGGCCAG	ATGAGAGAAC	CAAGGGGAAG	TGACATAGCA	GGAACACTACTA
960	970	980	990	1000
GTACCCTTCA	GGAACAAATA	GGATGGATGA	CAAATAATCC	ACCTATCCCA
1010	1020	1030	1040	1050
ATGGATAATC	CTGGGATTAA	ATAAAATAGT	1060	1070
1080	1090	1100	1110	1120
1130	1140			

AAGAAATGTAT AGCCCTACCA GCATTCTGGA CATAAGACAA GGACCAAAAAG AACCCTTTAG
 1150 1160 1170 1180 1190 1200
 AGACTATGTA GACCGGTTCT ATAAAACTCT AAGAGCCGAG CAAGCTTCAC AGGAGGTAAA
 1210 1220 1230 1240 1250 1260
 AAATTGGATG ACAGAAACCT TGTGGGTCCA AAATGCCGAC CCAGATTGTA AGACTATTTT
 1270 1280 1290 1300 1310 1320
 AAAAGCATTG GGACCAGCAG CTACACTAGA AGAAATGATG ACAGCATGTC AGGGAGTGGC
 1330 1340 1350 1360 1370 1380
 AGGACCCGGC CATAAGGCAA GAGTTTTGGC TGAAGCAATG AGCCAAGTAA CAAATTCAGC
 1390 1400 1410 1420 1430 1440
 TACCATAATG ATGCAAAGAG GCAATTTTAG GAACCAAAGA AAGATTGTTA AGTGTTTCAA
 1450 1460 1470 1480 1490 1500
 TTGTGGCAAA GAAGGGCACA TAGCCAGAAA TTCCAGGGCC CCTAGGAAAA AGGGCTGTTG
 1510 1520 1530 1540 1550 1560
 GAAATGTGGA AAGGAAGGAC ACCAAATGAA AGATTGTACT GAGAGACAGG CTAATTTTTT
 1570 1580 1590 1600 1610 1620
 AGGGAAGATC TGGCCTTCCT ACAAGGGAAG GCCAGGGAAT TTTCTTCAGA GCAGACCAGA
 1630 1640 1650 1660 1670 1680
 GCCAACAGCC CCACCAGAAG AGAGCTTCAG GTCTGGGGTA GAGACAACAA CTCCTCTCA
 1690 1700 1710 1720 1730 1740
 GAAGCAGGAG CCGATAGACA AGGAACTGTA TCCTTTAACT TCCCTCAGAT CACTCTTTGG
 1750
 CAACGACCCC TCCTCACAA

¹³
~~15~~. A DNA sequence as claimed in claim ~~13~~¹¹, wherein the DNA comprises the nucleotides:

670 680 690
AGTGCAGAAC ATCCAGGGGC AAATGGTACA T

and said DNA codes for a peptide having a relative molecular weight of about 25,000 daltons.

¹⁴
~~16.~~ A DNA sequence as claimed in claim ¹¹~~13~~, wherein the DNA has the sequence:

300
TTAGA

310 320 330 340 350
TCGATCGGAA AAAATTCGGT TAAGGCCAGG GGCAAAGAAA AAATATAAAT TAAAACAT.

h7
¹⁵
~~17.~~ A DNA sequence as claimed in claim ¹¹~~13~~, wherein the DNA has the sequence:

GCA AGC AGG GAG CTA GAA CGA TTC GCT GTT.

¹⁶
~~18.~~ A DNA sequence as claimed in claim ¹¹~~13~~, wherein the DNA has the sequence:

GGC CTG TTA GAA ACA TCA GAA GGC TGT AGA CAA ATA CTG GGA CAG
CTA CAA CCA CTT CAG ACA GGA TCA GAA GAA CTT AGA TCA TTA TAT.

¹⁷
~~19.~~ A DNA sequence as claimed in claim ¹¹~~13~~, wherein the DNA has the sequence:

530 540 550 560 570
GTGCATCAAA GGATAGAGAT AAAAGACACC AAGGAAGCTT TAGACAAGAT
580 590 600 610 620
AGAGGAAGAG CAAAACAAAA GTAAGAAAAA AGCACAGCAA GCAGCAGCTG
630 640 650 660 670
ACACAGGACA CAGCAGCCAG GTCAGCCAAA ATTACCCTAT AGTGCAGAAC
680 690 700 710
ATCCAGGGGC AAATGGTACA TCAGGCCATA TCACCTAGAA CTTTAAAT.

¹⁸
20. A DNA sequence as claimed in claim ¹¹13, wherein the DNA has the sequence:

GTA GTA GAA GAG AAG GCT TTC AGC.

¹⁹
21. A DNA sequence as claimed in claim ¹¹13, wherein the DNA has the sequence:

GGA GCC ACC CCA CAA GAT TTA AAC ACC ATG CTA.

²⁰
22. A DNA sequence as claimed in claim ¹¹13, wherein the DNA has the sequence:

860 870 880 890 900
ATGT TAAAAGAGAC CATCAATGAG GAAGCTGCAG AATGGGATAG
910
AGTGCATCCA GTGCATGCA.

²¹
23. A DNA sequence as claimed in claim ¹¹13, wherein the DNA has the sequence:

GGC CAG ATG AGA GAA CCA AGG GGA AGT.

²²
24. A DNA sequence as claimed in claim ¹¹13, wherein the DNA has the sequence:

980 990 1000 1010 1020
ACTACTA GTACCCTTCA GGAACAAATA GGATGGATGA CAAATAATCC
1030 1040 1050
ACCTATCCCA GTAGGAGAAA TTTATAAAAG A.

²³
25. A DNA sequence as claimed in claim ¹¹13, wherein the DNA has the sequence:

1130 1140 1150 1160 1170
GGACCAAAAG AACCCCTTTAG AGACTATGTA GACCGGTTGT ATAAAACTCT
1180 1190 1200 1210 1220
AAGAGCCGAG CAAGCTTCAC AGGAGGTAA AAATTGGATG ACAGAAACCT
1230 1240 1250
TGTTGTGTC A AATGCGAAC CCAGATTGTA AG.

²⁴
~~26.~~ A DNA sequence as claimed in claim ¹¹~~13~~, wherein the DNA has the sequence:

GGA GTG GGA GGA CCC GGC CAT AAG GCA AGA.

²⁵
~~27.~~ A DNA sequence as claimed in claim ¹¹~~13~~, wherein the DNA has the sequence:

1390 1400 1410 1420
ATG ATGCAAAGAG GCAATTTTAG GAACCAAAGA AAGATTGTT.

²⁶
~~28.~~ A DNA sequence as claimed in claim ¹¹~~13~~, wherein the DNA has the sequence:

1460 1470 1480 1490 1500
GGGCACA TAGCCAGAAA TTGCAGGGCC CCTAGGAAAA AGGGCTGTTG
1510 1520 1530 1540 1550
GAAATGTGGA AAGGAAGGAC ACCAAATGAA AGATTGTACT GAGAGACAGG CTA.

²⁷
~~29.~~ A DNA sequence as claimed in claim ¹¹~~13~~, wherein the DNA has the sequence:

1570 1580 1590 1600 1610
ATC TGGCCTTCCT ACAAGGGAAG GCCAGGGAAT TTTCTTCAGA
1620 1630 1640 1650 1660
GCAGACCAGA GCCAACAGCC CCACCAGAAG AGAGCTTCAG GTCTGGGGTA
1670 1680 1690 1700 1710
GAGACAACAA CTCCCTCTCA GAAGCAGGAG CCGATAGACA AGGAACTGTA T.

²⁸
~~30.~~ A DNA sequence as claimed in claim ¹¹~~13~~, wherein the DNA has the sequence:

CTC TTT GGC AAC GAC CCC TCG.

²⁹
~~31.~~ A cloned DNA sequence of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA is free of particles of said virus and the DNA has the sequence:

1560
TTTTTT

1570 1580 1590 1600 1610 1620
AGGGAAGATC TGGCCTTCCT ACAAGGGAAG GCCAGGGAAT TTTCTTCAGA GCAGACCAGA

1630 1640 1650 1660 1670 1680
GCCAACAGCC CCACCAGAAG AGAGCTTCAG GTCTGGGGTA GAGACAACAA CTCCTCTCA

1690 1700 1710 1720 1730 1740
GAAGCAGGAG CCGATAGACA AGGAACTGTA TCCTTTAACT TCCCTCAGAT CACTCTTTGG

1750 1760 1770 1780 1790 1800
CAACGACCCC TCGTCACAAT AAAGATAGGG GGGCAACTAA AGGAAGCTCT ATTAGATACA

1810 1820 1830 1840 1850 1860
GGAGCAGATG ATACAGTATT AGAAGAAATG AGTTTGCCAG GAAGATGGAA ACCAAAAATG

1870 1880 1890 1900 1910 1920
ATAGGGGGAA TTGGAGGTTT TATCAAAGTA AGACAGTATG ATCAGATACT CATAGAAATC

1930 1940 1950 1960 1970 1980
TGTGGACATA AAGCTATAGG TACAGTATTA GTAGGACCTA CACCTGTCAA CATAATTGGA

1990 2000 2010 2020 2030 2040
AGAAATCTGT TGAATCAGAT TGGTTGCACT TTAAATTTTC CCATTAGTCC TATTGAAACT

2050 2060 2070 2080 2090 2100
GTACCAGTAA AATTAAAGCC AGGAATGGAT GGCCCAAAAG TTAAACAATG GCCATTGACA

2110 2120 2130 2140 2150 2160
GAAGAAAAAA TAAAGCATT AGTAGAAATT TGTACAGAAA TGGAAAAGGA AGGGAAAATT

2170 2180 2190 2200 2210 2220
TCAAAAATTG GGCCTGAAAA TCCATACAAT ACTCCAGTAT TTGCCATAAA GAAAAAAGAC

2230 2240 2250 2260 2270 2280
AGTACTAAAT GGAGAAAATT AGTAGATTTT AGAGAACTTA ATAAGAGAAC TCAAGACTTC

2290 2300 2310 2320 2330 2340
TGGGAAGTTC AATTAGGAAT ACCACATCCC GCAGGGTTAA AAAAGAAAAA ATCAGTAACA

2350 2360 2370 2380 2390 2400

GAGGTGATG TGGGTGATGC ATATTTTTC A GTTCCCTTAG ATGAAGACTT CAGGAAGTAT
 2410 2420 2430 2440 2450 2460
 ACTGCATTTA CCATACCTAG TATAAACAAT GAGACAECAG GGATTAGATA TCAGTACAAT
 2470 2480 2490 2500 2510 2520
 GTGCTTCCAC AGGGATGGAA AGGATCACCA GCAATATTCC AAAGTAGCAT GACAAAAATC
 2530 2540 2550 2560 2570 2580
 TTAGAGCCTT TTAGAAAAACA AAATCCAGAC ATAGTTATCT ATCAATACAT GGATGATTTG
 2590 2600 2610 2620 2630 2640
 TATGTAGGAT CTGACTTAGA AATAGGGCAG CATAGAACAA AAATAGAGGA GCTGAGACAA
 2650 2660 2670 2680 2690 2700
 CATCTGTTGA GGTGGGGACT TACCACACCA GACAAAAAAC ATCAGAAAGA ACCTCCATTC
 2710 2720 2730 2740 2750 2760
 CTTTGGATGG GTTATGAACT CCATCCTGAT AAATGGACAG TACAGCCTAT AGTGCTGCCA
 2770 2780 2790 2800 2810 2820
 GAAAAAGACA GCTGGACTGT CAATGACATA CAGAAGTTAG TGGGAAAATT GAATTGGGCA
 2830 2840 2850 2860 2870 2880
 AGTCAGATTT ACCCAGGGAT TAAAGTAAGG CAATTATGTA AACTCCTTAG AGGAACCAAA
 2890 2900 2910 2920 2930 2940
 GCACTAACAG AAGTAATACC ACTAACAGAA GAAGCAGAGC TAGAACTGGC AGAAAAACAGA
 2950 2960 2970 2980 2990 3000
 GAGATTCTAA AAGAACCAGT ACATGGAGTG TATTATGACC CATCAAAAGA CTTAATAGCA
 3010 3020 3030 3040 3050 3060
 GAAATACAGA AGCAGGGGCA AGGCCAATGG ACATATCAAA TTTATCAAGA GCCATTTAAA
 3070 3080 3090 3100 3110 3120
 AATCTGAAAA CAGGAAAATA TGCAAGAACG AGGGGTGCCC AACTAATGA TGTAACACAA
 3130 3140 3150 3160 3170 3180
 TTAACAGAGG CAGTGCAAAA AATAACCACA GAAAGCATAG TAATATGGGG AAAGACTCCT
 3190 3200 3210 3220 3230 3240
 AAATTTAAAC TACCCATACA AAAGGAAACA TGGGAAACAT GGTGGACAGA GTATTGGCAA
 3250 3260 3270 3280 3290 3300
 GCCACCTGGA TTCCTGAGTG GGAGTTTGTG AATACCCCTC CTTTAGTGAA ATTATGCTAC
 3310 3320 3330 3340 3350 3360
 CAGTTAGAGA AAGAACCCAT AGTAGGAGCA GAAACGTTCT ATGTAGATGG GGCAGCTAGC
 3370 3380 3390 3400 3410 3420
 AGGGAGACTA AATTAGCAAA AGCAGGATAT GTTACTAATA GAGGAAGACA AAAAGTTGTC

3430 3440 3450 3460 3470 3480
 ACCCTAACTG ACACAACAAA TCAGAAGACT GAGTTACAAG CAATTCATCT AGCTTTGCAG
 3490 3500 3510 3520 3530 3540
 GATTCCGGAT TAGAAGTAAA TATAGTAACA GACTCACAAT ATGCATTAGG AATCATTCAA
 3550 3560 3570 3580 3590 3600
 GCACAACCAG ATAAAAGTGA ATCAGAGTTA GTCAATCAAA TAATACAGCA GTTAATAAAA
 3610 3620 3630 3640 3650 3660
 AAGCAAAAGG TCTATCTGGC ATGGGTACCA GCACACAAGG GAATTGGAGG AAATGAACAA
 3670 3680 3690 3700 3710 3720
 GTAGATAAAT TAGTCAGTGC TGGAAATCAGG AAAGTACTAT TTTTAGATGG AATAGATAAG
 3730 3740 3750 3760 3770 3780
 GCCCAAGATG AACATGAGAA ATATCACAGT AATTGGAGAG CAATGGCTAG TGATTTTAAC
 3790 3800 3810 3820 3830 3840
 CTGCCACCTG TAGTAGCAAA AGAAATAGTA GCCAGCTGTG ATAAATGTCA GCTAAAAGGA
 3850 3860 3870 3880 3890 3900
 GAAGCCATGC ATGGACAAGT AGACTGTAGT CCAGGAATAT GGCAACTAGA TTGTACACAT
 3910 3920 3930 3940 3950 3960
 TTAGAAGGAA AAGTTATCCT GGTAGCAGTT CATGTAGCCA GTGGATATAT AGAAGCAGAA
 3970 3980 3990 4000 4010 4020
 GTTATTCCAG CAGAAACAGG GCAGGAAACA GCATACTTTC TTTTAAAATT AGCAGGAAGA
 4030 4040 4050 4060 4070 4080
 TGGCCAGTAA AAACAATACA TACAGACAAT GGCAGCAATT TCACCAGTAC TACGGTTAAG
 4090 4100 4110 4120 4130 4140
 GCCGCCCTGT GGTGGGCGGG AATCAAGCAG GAATTTGGAA TTCCCTACAA TCCCCAAAGT
 4150 4160 4170 4180 4190 4200
 CAAGGAGTAG TAGAATCTAT GAATAAAGAA TTAAAGAAAA TTATAGGCCA GGTAAGAGAT
 4210 4220 4230 4240 4250 4260
 CAGGCTGAAC ATCTTAAGAC AGCAGTACAA ATGGCAGTAT TCATCCACAA TTTTAAAAGA

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4270	4280	4290	4300	4310	4320
AAAGGGGGGA	TTGGGGGGTA	CAGTGCAGGG	GAAAGAATAG	TAGACATAAT	AGCAACAGAC
4330	4340	4350	4360	4370	4380
ATACAAACTA	AAGAATTACA	AAAACAAATT	ACAAAAATTC	AAAATTTTCG	GGTTTATTAC
4390	4400	4410	4420	4430	4440
AGGGACAGCA	GAGATCCACT	TTGGAAAGGA	CCAGCAAAGC	TCCTCTGGAA	AGGTGAAGGG
4450	4460	4470	4480	4490	4500
GCAGTAGTAA	TACAAGATAA	TAGTGACATA	AAAGTAGTGC	CAAGAAGAAA	AGCAAAGATC
4510	4520	4530	4540	4550	4560
ATTAGGGATT	ATGGAAAACA	GATGGCAGGT	GATGATTGTG	TGGCAAGTAG	ACAGGATGAG
4570	4580	4590	4600	4610	4620
GATTAGAACA	TGCAAAAGTT	TAGTAAAACA	CCATATGTAT	GTTTCAGGGA	AAGCTAGGGG
4630	4640	4650	4660	4670	4680
ATGGTTTTAT	AGACATCACT	ATGAAAGCCC	TCATCCAAGA	ATAAGTTCAG	AAGTACACAT
4690	4700	4710	4720	4730	4740
CCCACTAGGG	GATGCTAGAT	TGGTAATAAC	AACATATTGG	GGTCTGCATA	CAGGAGAAAG
4750	4760	4770	4780	4790	4800
AGACTGGCAT	CTGGGTCAGG	GAGTCTCCAT	AGAATGGAGG	AAAAAGAGAT	ATAGCACACA
4810	4820	4830	4840	4850	4860
AGTAGACCCT	GAAGTAGCAG	ACCAACTAAT	TCATCTGTAT	TACTTTGACT	GTTTTTCAGA
4870	4880	4890	4900	4910	4920

CTCTGCTATA AGAAAGCCCT TATTAGGACA TATAGTTAGC CCTAGGTGTG AATATCAAGC

4930 4940 4950 4960 4970 4980
AGGACATAAC AAGGTAGGAT CTCTACAATA CTGGGCACTA GCAGCATTAA TAACACCAAA

4990 5000 5010 5020 5030 5040
AAAGATAAAG CCACCTTTGC CTAGTGTTAC GAAACTGACA GAGGATAGAT GGAACAAGCC

5050 5060 5070 5080
CCAGAAGACC AAGGGCCACA GAGGGAGCCA CACAATGAAT GGACAC -

hr

30
52.

A cloned DNA sequence of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA is free of particles of said virus and the DNA ^{has} ~~contains at least a portion of~~ the sequence:

5670 5680 5690 5700
A AAGAGCAGAA GACAGTGGCA ATGAGAGTGA

5710 5720 5730 5740 5750 5760
AGGAGAAATA TCAGCACTTG TGGAGATGGG GGTGGAAATG GGGCACCATG CTCCTTGGGA

5770 5780 5790 5800 5810 5820
TATTGATGAT CTGTAGTGCT ACAGAAAAAT TGTGGGTCAC AGTCTATTAT GCGGTACCTG

5830 5840 5850 5860 5870 5880
TGTGGAAGGA AGCAACCACC ACTCTATTTT GTGCATCAGA TGCTAAAGCA TATGATACAG

5890 5900 5910 5920 5930 5940
AGGTACATAA TGTTTGGGCC ACACATGCCT GTGTACCCAC AGACCCCAAC CCACAAGAAG

5950 5960 5970 5980 5990 6000
TAGTATTGGT AAATGTGACA GAAAATTTTA ACATGTGGAA AAATGACATG GTAGAACAGA

6010 6020 6030 6040 6050 6060
TGCATGAGGA TATAATCAGT TTATGGGATC AAAGCCTAAA GCCATGTGTA AAATTAACCC

6070 6080 6090 6100 6110 6120
CACTCTGTGT TAGTTTAAAG TGCCTGATT TGGGGAATCC TACTAATACC AATAGTAGTA

6130 6140 6150 6160 6170 6180
ATACCAATAG TAGTAGCGGG GAAATGATCA TGGAGAAAGG AGAGATAAAA AACTGCTCTT

6190 6200 6210 6220 6230 6240
TCAATATCAG CACAAGCTA AGAGGTAAGG TGCAGAAAGA ATATGCATTT TTTTATAAAC

6250 6260 6270 6280 6290 6300
TTGATATAAT ACCAATAGAT AATGATACTA CCAGCTATAC GTTGACAAGT TGTAACACCT

6310 6320 6330 6340 6350 6360
CAGTCATTAC ACAGGCCTGT CCAAAGGTAT CCTTTGAGCC AATTCCCATA CATTATTGTC

6370 6380 6390 6400 6410 6420
CCCCGGCTGG TTTTGCGATT CTAAAATGTA ATAATAAGAC GTTCAATGGA ACAGGACCAT

6430 6440 6450 6460 6470 6480
GTACAAATGT CAGCACAGTA CAATGTACAC ATGGAATTAG GCCAGTAGTA TCAACTCAAC

6490 6500 6510 6520 6530 6540
TGCTGTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTTTCACAG

6550 6560 6570 6580 6590 6600
ACAATGCTAA AACCATAATA GTACAGCTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC

6610 6620 6630 6640 6650 6660
CCAACAACAA TACAAGAAAA AGTATCCGTA TCCAGAGGGG ACCAGGGAGA GCATTTGTTA

6670 6680 6690 6700 6710 6720
CAATAGGAAA AATAGGAAAT ATGAGACAAG CACATTGTAA CATTAGTAGA GCAAAATGCA

6730 6740 6750 6760 6770 6780
ATGCCACTTT AAAACAGATA GCTAGCAAAT TAAGAGAACA ATTTGGAAAT AATAAAACAA

6790 6800 6810 6820 6830 6840
TAATCTTTAA GCAATCCTCA GGAGGGGACC CAGAAATTGT AAGGCACAGT TTTAATTGTG

6850 6860 6870 6880 6890 6900
GAGGGGAATT TTTCTACTGT AATTCAACAC AACTGTTTAA TAGTACTTGG TTTAATAGTA

6910 6920 6930 6940 6950 6960
CTTGGAGTAC TGAAGGGTCA AATAACACTG AAGGAAGTGA CACAATCACA CTCCCATGCA

6970 6980 6990 7000 7010 7020
GAATAAAACA ATTTATAAAC ATGTGGCAGG AAGTAGGAAA AGCAATGTAT GCCCCTCCCA

7030 7040 7050 7060 7070 7080
TCAGCGGACA AATTAGATGT TCATCAAATA TTACAGGGCT GCTATTAACA AGAGATGGTG

7090 7100 7110 7120 7130 7140
GTAATAACAA CAATGGGTCC GAGATCTTCA GACCTGGAGG AGGAGATATG AGGGACAATT

7150 7160 7170 7180 7190 7200
GGAGAAGTGA ATTATATAAA TATAAAGTAG TAAAAATTGA ACCATTAGGA GTAGCACCCA

7210 7220 7230 7240 7250 7260
CCAAGGCAAA GAGAAGAGTG GTGCAGAGAG AAAAAAGAGC AGTGGGAATA GGAGCTTTGT

7270 7280 7290 7300 7310 7320
TCCTTGGGTT CTTGGGAGCA GCAGGAAGCA CTATGGGCCC ACGGTCAATG ACGCTGACGG

7330 7340 7350 7360 7370 7380
TACAGGCCAG ACAATTATTG TCTGGTATAG TGCAGCAGCA GAACAATTTG CTGAGGGCTA

7390 7400 7410 7420 7430 7440

TTGAGGCGCA ACAUCATCTG TTGCAACTCA CAGTCTGGGG CATCAAGCAG CTCCAGGCAA
 7450 7460 7470 7480 7490 7500
 GAATCCTGGC TGTGGAAAGT TACCTAAAGG ATCAACAGCT CCTGGGGATT TGGGGTTGCT
 7510 7520 7530 7540 7550 7560
 CTGGAAACT CATTTCACC ACTGCTGTGC CTTGGAATGC TAGTTGGAGT AATAAATCTC
 7570 7580 7590 7600 7610 7620
 TGGAAACAGAT TTGGAATAAC ATGACCTGGA TGCAGTGGGA CAGAGAAATT AACAATTACA
 7630 7640 7650 7660 7670 7680
 CAAGCTTAAT ACATTCTTA ATTGAAGAAT CGCAAAACCA GCAAGAAAAG AATGAACAAG
 7690 7700 7710 7720 7730 7740
 AATTATTGGA ATTAGATAAA TGGGCAAGTT TGTGGAATTG GTTTAACATA ACAAATTGGC
 7750 7760 7770 7780 7790 7800
 TGTGGTATAT AAAAATATTC ATAATGATAG TAGGAGGCTT GCTAGGTTTA AGAATAGTTT
 7810 7820 7830 7840 7850 7860
 TTGCTGTAAT TTCTATAGTG AATAGAGTTA GGCAGGGATA TTCACCATTG TCGTTTCAGA
 7870 7880 7890 7900 7910 7920
 CCCACCTCCC AACCCCGAGG GGACCCGACA GGCCCGAAGG AATAGAAGAA GAACGTGGAG
 7930 7940 7950 7960 7970 7980
 AGAGAGACAG AGACAGATCC ATTCGATTAG TGAACGGATC CTTAGCACTT ATCTGGGACG
 7990 8000 8010 8020 8030 8040
 ATCTGGGGAG CCTTGTGCCT CTTAGCTAC CACCGCTTGA GAGACTTACT CTTGATTGTA
 8050 8060 8070 8080 8090 8100
 ACGAGGATTG TGGAACTTCT GGGACGCAGG GGGTGGGAAG CCCTCAAATA TTGGTGGAAAT
 8110 8120 8130
 CTCCTACAGT ATTGGAGTCA GGAACATAAG AA .

³¹
~~33~~. A DNA sequence as claimed in claim ³⁰
~~32~~, wherein the DNA
has the sequence:

5700
ATGAGAGTGA

5710 5720 5730 5740 5750 5760
AGGAGAAATA TCAGCACTTG TGGAGATGGG GGTGGAAATG GGGCACCATG CTCCTTGGGA

5770 5780 5790 5800 5810 5820
TATTGATGAT CTGTAGTGCT ACAGAAAAAT TGTGGGTCAC AGTCTATTAT GCGGTACCTG

5830 5840 5850 5860 5870 5880
TGTGGAAGGA AGCAACCACC ACTCTATTTT GTGCATCAGA TGCTAAAGCA TATGATACAG

5890 5900 5910 5920 5930 5940
AGGTACATAA TGTITGGGCC ACACATGCCT GTGTACCCAC AGACCCCAAC CCACAAGAAG

5950 5960 5970 5980 5990 6000
TAGTATTGGT AATATGTGACA GAAAATTTTA ACATGTGGAA AAATGACATG GTAGAACAGA

6010 6020 6030 6040 6050 6060
TGCATGAGGA TATAATCAGT TTATGGGATC AAAGCCTAAA GCCATGTGTA AAATTAACCC

6070 6080 6090 6100 6110 6120
CACTCTGTGT TAGTTTAAAG TGCCTGATT TGGGGAATGC TACTAATACC AATAGTAGTA

6130 6140 6150 6160 6170 6180
ATACCAATAG TAGTAGCGGG GAAATGATGA TGGAGAAAGG AGAGATAAAA AACTGCTCTT

6190 6200 6210 6220 6230 6240
TCAATATCAG CACAAGCATA AGAGGTAAGG TGCAGAAAGA ATATGCATTT TTTTATAAAC

6250 6260 6270 6280 6290 6300
TTGATATAAT ACCAATAGAT AATGATACTA CCAGCTATAC GTTGACAAGT TGTAACACCT

6310 6320 6330 6340 6350 6360
CAGTCATTAC ACAGGCCTGT CCAAAGGTAT CCTTTGAGCC AATTCCCATG CATTATTGTG

6370 6380 6390 6400 6410 6420
CCCCGGCTGG TTTTGCGATT CTAAAATGTA ATAATAAGAC GTTCAATGGA ACAGGACCAT

6430 6440 6450 6460 6470 6480
GTACAAATGT CAGCACAGTA CAATGTACAC ATGGAATTAG GCCAGTAGTA TCAACTCAAC

6490 6500 6510 6520 6530 6540
TGCTGTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTTACAG

6550 6560 6570 6580 6590 6600
ACAATGCTAA AACCATAATA GTACAGCTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC

6610 6620 6630 6640 6650 6660
CCAACAACAA TACAAGAAAA AGTATCCGTA TCCAGAGGGG ACCAGGGAGA GCATTGTGTA

6670 6680 6690 6700 6710 6720
CAATAGGAAA AATAGGAAAT ATGAGACAAG CACATTGTAA CATTAGTAGA GCAAAATGCA

6730 6740 6750 6760 6770 6780
ATGCCACTTT AAAACAGATA GCTAGCAAAT TAAGAGAACA ATTTGGAAAT AATAAAACAA

6790 6800 6810 6820 6830 6840
TAATCTTTAA GCAATCCTCA GGAGGGGACC CAGAAATTGT AACCCACAGT TTTAATTGTC

6850 6860 6870 6880 6890 6900
GAGGGGAATT TTTCTACTGT AATTCAACAC AACTGTTTAA TAGTACTTGG TTTAATAGTA

6910 6920 6930 6940 6950 6960
CTTGGAGTAC TGAAGGGTCA AATAACACTG AAGGAAGTGA CACAATCACA CTCCCATGCA

6970 6980 6990 7000 7010 7020
GAATAAAACA ATTTATAAAC ATGTGGCAGG AAGTAGGAAA AGCAATGTAT GCCCCTCCCA

7030 7040 7050 7060 7070 7080
TCAGCGGACA AATTAGATGT TCATCAAATA TTACAGGGCT GCTATTAACA AGAGATGGTG

7090 7100 7110 7120 7130 7140
GTAATAACAA CAATGGGTCC GAGATCTTCA GACCTGGAGG AGGAGATATG AGGGACAATT

7150 7160 7170 7180 7190 7200
GGAGAAGTGA ATTATATAAA TATAAAGTAG TAAAAATTGA ACCATTAGGA GTAGCACCCA

7210 7220 7230 7240 7250 7260
CCAAGGCAAA GAGAAGAGTG GTGCAGAGAG AAAAAAGAGC AGTGGGAATA GGAGCTTTGT

7270 7280 7290 7300 7310 7320
TCCTTGGGTT CTTGGGAGCA GCAGGAAGCA CTATGGGCCC ACGGTCAATG ACGCTGACGG

7330 7340 7350 7360 7370 7380
TACAGGCCAG ACAATTATTG TCTGGTATAG TGCAGCAGCA GAACAATTTG CTGAGGGCTA

7390 7400 7410 7420 7430 7440

TTGAGGCGCA ACAGCATCTG TTGCAACTCA CAGTCTGGGG CATCAAGCAG CTCCAGGCAA
 7450 7460 7470 7480 7490 7500
 GAATCCTGGC TGTGGAAAGA TACCTAAAGG ATCAACAGCT CCTGGGGATT TGGGGTTGCT
 7510 7520 7530 7540 7550 7560
 CTGGAAAACT CATTTGCACC ACTGCTGTGC CTTGGAATGC TAGTTGGAGT AATAAATCTC
 7570 7580 7590 7600 7610 7620
 TGGAAACAGAT TTGGAATAAC ATGACCTGGA TGCAGTGGGA CAGAGAAATT AACAATTACA
 7630 7640 7650 7660 7670 7680
 CAAGCTTAAT ACATTCCTTA ATTGAAGAAT CGCAAAACCA GCAAGAAAAG AATGAACAAG
 7690 7700 7710 7720 7730 7740
 AATTATTGGA ATTAGATAAA TGGGCAAGTT TGTGGAATTG GTTTAACATA ACAAATTGGC
 7750 7760 7770 7780 7790 7800
 TGTGGTATAT AAAAATATTC ATAATGATAG TAGGAGGCTT GCTAGGTTTA AGAATAGTTT
 7810 7820 7830 7840 7850 7860
 TTGCTGTACT TTCTATAGTG AATAGAGTTA GGCAGGGATA TTCACCATTA TCGTTTCAGA
 7870 7880 7890 7900 7910 7920
 CCCACCTCCC AACCCCGAGG GGACCCGACA GGCCCGAAGG AATAGAAGAA GAAGGTGGAG
 7930 7940 7950 7960 7970 7980
 AGAGAGACAG AGACAGATCC ATTCGATTAG TGAACGGATC CTTAGCACTT ATCTGGGACG
 8000 8010 8020 8030 8040
 ATCTGGGGAG CTTTGTGCCT CTTGAGCTAC CACCGCTTGA GAGACTTACT CTTGATTGTA
 8050 8060 8070 8080 8090 8100
 ACGAGGATTG TGGAACTTCT GGGACGCAGG GGGTGGGAAG CCCTCAAATA TTGGTGGAAAT
 8110 8120 8130
 CTCCTACAGT ATTGGAGTCA GGAACATAAG AA.

³²
~~34~~. A DNA sequence as claimed in claim ³⁰~~32~~, wherein the DNA contains less than 750 nucleotides and at least one nucleotide sequence selected from the group consisting of:

- (A) AAT GTG ACA;
(B) AAT GCT ACT;
(C) AAT AGT AGT;
(D) AAC TGC TCT;
(E) AAT ATC AGC;
(F) AAT GAT ACT;
(G) AAC ACC TCA;
(H) AAT AAG ACG;
(I) AAT GGA ACA;
(J) AAT GTC AGC;
(K) AAT GGC AGT;
(L) AAT TTC ACA;
(M) AAC CAA TCT;
(N) AAT TGT ACA;
(O) AAC AAT ACA;
(P) AAC ATT AGT;
(Q) AAT GCC ACT;
(R) AAT AAA ACA;
(S) AAT TCA ACA;
(T) AAT AGT ACT;
(U) AAT AGT ACT;
(V) AAT AGT ACT;

(W) AAT AAC ACT;
(X) AAT ATT ACA;
(Y) AAT GGG TCC;
(Z) AAT GCT AGT;
(AA) AAT AAA TCT;
(BB) AAC ATG ACC;
(CC) AAT TAC ACA; and
(DD) AAC ATA ACA.

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³³₃₅. A DNA sequence as claimed in claim ³²₃₄, wherein the DNA contains not more than about 600 nucleotides.

³⁴₃₆. A DNA sequence as claimed in claim ³²₃₄, wherein the DNA contains less than about 450 nucleotides.

³⁵
~~37~~. A DNA sequence as claimed in claim ³⁰
~~32~~, wherein the DNA
has a sequence selected from the group consisting of:

(a)

6100 6110 6120 6130 6140
GAATGC TACTAATACC AATAGTAGTA ATACCAATAG TAGTAGCGGG
6150 6160 6170 6180 6190
GAAATGATGA TGGAGAAAGG AGAGATAAAA AACTGCTCTT TCAATATCAG
6200
CACAAGCATA;

(b)

6260 6270 6280 6290 6300
T AATGATACTA CCAGCTATAC GTTGACAAGT TGTAACACCT
6310
CAGTCATTAC;

(c)

6390 6400 6410 6420 6430
A ATAATAAGAC GTTCAATGGA ACAGGACCAT GTACAAATGT
6440
GAGCACAGTA;

(d)

6490 6500 6510 6520 6530
GTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC
6540 6550 6560 6570 6580
AATTTCACAG ACAATGCTAA AACCATAATA GTACAGCTGA ACCAATCTGT
6590 6600 6610 6620
AGAAATTAAT TGTACAAGAC CCAACAACAA TACAAGAAAA;

(e)

6860 6870 6880 6890 6900
T AATTCAACAC AACTGTTTAA TAGTACTTGG TTTAATAGTA
6910 6920 6930
CTTGGAGTAC TGAAGGGTCA AATAACACTG; and

(f)

7540 7550 7560 7570 7580
GAATGC TAGTTGGAGT AATAAATCTC TGGAACAGAT TTGGAATAAC
7590 7600 7610 7620 7630
ATGACCTGGA TGGAGTGGGA CAGAGAAATT AACAAATTACA CAAGCTTAAT.

³⁶₃₆. A DNA sequence as claimed in claim ³⁰₃₂, wherein the DNA has the sequence:

ATG AGA CTG AAG GAG AAA TAT CAG

CAC TTG TGG AGA TGG GGG TGG AAA.

³⁷₃₈. A DNA sequence as claimed in claim ³⁰₃₂, wherein the DNA has the sequence:

TCA GAT GCT AAA GCA TAT GAT ACA

GAG GTA CAT AAT GTT TGG GCC ACA.

³⁸₄₀. A DNA sequence as claimed in claim ³⁰₃₂, wherein the DNA has the sequence:

GTA CCC ACA GAC CCC AAC CCA CAA GAA.

³⁹₄₁. A DNA sequence as claimed in claim ³⁰₃₂, wherein the DNA has the sequence:

ACA GAA AAT TTT AAC ATG TGG AAA AAT GAC ATG GTA GAA CAG

ATG CAT GAG GAT ATA ATC AGT TTA ATC TGG CAA AGT CTA.

⁴⁰
~~42~~. A DNA sequence as claimed in claim ³⁰~~32~~, wherein the DNA has the sequence:

6050 6060 6070 6080 6090 6100
TA AAATTAACC CACTCTGTGT TAGTTTAAAG TGCCTGATT TGGGGAATGC

 6110 6120 6130 6140 6150
TACTAATACC AATAGTAGTA ATACCAATAG TAGTAGCGGG GAAATGATGA

 6160 6170 6180 6190 6200
TGGAGAAAGG AGAGATAAAA AACTGCTCTT TCAATATCAG CACAAGCATA

 6210
AGAGGTAAGG TGCAGAAA.

⁴¹
~~43~~. A DNA sequence as claimed in claim ³⁰~~32~~, wherein the DNA has the sequence:

GAT AAT GAT ACT ACC.

⁴²
44. A DNA sequence as claimed in claim ³⁰~~32~~, wherein the DNA has the sequence:

6390 6400 6410 6420 6430
CTAAAATGTA ATAATAAGAC GTTCAATGGA ACAGGACCAT GTACAAATGT
6440 6450 6460 6470 6480
CAGCACAGTA CAATGTACAC ATGGAATTAG GCCAGTAGTA TCAACTCAAC
6490 6500 6510 6520 6530
TGCTGTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC
6540 6550
AATTTCACAG ACAATTGCTAA A.

⁴³
45. A DNA sequence as claimed in claim ³⁰~~32~~, wherein the DNA has the sequence:

6570 6580 6590 6600 6610 6620
CTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC CCAACAACAA TACAAGAAAA
6630 6640 6650
AGTATCCGTA TCCAGAGGGG ACCAGGGAGA.

⁴⁴
46. A DNA sequence as claimed in claim ³⁰~~32~~, wherein the DNA has the sequence:

6670 6680 6690 6700 6710 6720
AA AATAGGAAAT ATGAGACAAG CACATTGTAA CATTAGTAGA GCAAAATGGA
6730 6740 6750 6760 6770
ATGCCACTTT AAAACAGATA GCTAGCAAAT TAAGAGAACA ATTTGGAAAT
6780 6790 6800 6810
AATAAAACAA TAATCTTTAA GCAATCCTCA GGAGGGGACC CA.

⁴⁵
47. A DNA sequence as claimed in claim ³⁰~~32~~, wherein the DNA has the sequence:

6860 6870 6880 6890 6900 6910
TGT AATTCAACAC AACTGTTTAA TAGTACTTGG TTTAATAGTA CTTGGAGTAC
6920 6930 6940
TGAAGGGTCA AATAACACTG AAGGAAGTGA C.

⁴⁶
~~48.~~ A DNA sequence as claimed in claim ³⁰~~32~~, wherein the DNA has the sequence:

7070 7080 7090 7100 7110
TTAACA AGAGATGGTG GTAATAACAA CAATGGGTCC GAGATCTTCA

7120 7130 7140 7150 7160
GACCTGGAGG AGGAGATATG AGGGACAATT GGAGAAGTGA ATTATATAAA
TATAAAGTA.

⁴⁷
~~49.~~ A DNA sequence as claimed in claim ³⁰~~32~~, wherein the DNA has the sequence:

7200 7210 7220 7230
CCCA CCAAGGCAAA GAGAAGAGTG GTGCAGAGAG AAAAAAGA.

⁴⁸
~~50.~~ A DNA sequence as claimed in claim ³⁰~~32~~, wherein the DNA has the sequence:

7320 7330 7340 7350 7360
G TACAGGCCAG ACAATTATTG TCTGGTATAG TGCAGCAGCA

7370 7380 7390 7400
GAACAATTTG CTGAGGGCTA TTGAGGCGCA ACAGCATCTG.

⁴⁹
~~51.~~ A DNA sequence as claimed in claim ³⁰~~32~~, wherein the DNA has the sequence:

7450 7460 7470
GC TGTGGAAAGA TACCTAAAGG ATCAACAG.

⁵⁰
~~52.~~ A DNA sequence as claimed in claim ³⁰~~32~~, wherein the DNA has the sequence:

7530 7540 7550
C CTTGGAATGC TAGTTGGAGT AATAAATCT.

⁵¹
~~53.~~ A DNA sequence as claimed in claim ³⁰~~32~~, wherein the DNA has the sequence:

7640 7650 7660 7670 7680
 TTA ATTGAAGAAT CGCAAAACCA GCAAGAAAAG AATGAACAAG
 7690 7700
 AATTATTGGA ATTAGATAAA TGGGCA.

⁵²
 54. A DNA sequence as claimed in claim ³⁰~~32~~, wherein the DNA has the sequence:

7830 7840 7850 7860 7870
 AGAGTTA GGCAGGGATA TTCACCATTA TCGTTTCAGA CCCACCTCCC
 7880 7890 7900 7910 7920
 AACCCCGAGG GGACCCGACA GGCCCGAAGG AATAGAAGAA GAAGGTGGAG
 7930 7940
 AGAGAGACAG AGACAGATCC ATT.

⁵³
 55. A DNA sequence as claimed in claim ³⁰~~32~~, wherein the DNA has the sequence:

8010 8020 8030 8040 8050
 CTAC CACCGCTTGA GAGACTTACT CTTGATTGTA ACGAGGATTG
 8060 8070
 TGGAACTTCT GGGACGCAGG GGGTGGGA.

⁵⁴
 56. A cloned DNA sequence of Human Immunodeficiency Virus Type 1 (HIV-1) coding for a peptide having a relative molecular weight greater than 91,000 daltons, wherein the DNA is free of particles of said virus.

⁵⁵
~~57.~~ A DNA sequence as claimed in claim ⁵⁴~~56~~, wherein the DNA contains at least one of the following nucleotide sequences:

- B7
cont*
- (A) AAT GTG ACA;
 - (B) AAT GCT ACT;
 - (C) AAT AGT AGT;
 - (D) AAC TGC TCT;
 - (E) AAT ATC AGC;
 - (F) AAT GAT ACT;
 - (G) AAC ACC TCA;
 - (H) AAT AAG ACG;
 - (I) AAT GGA ACA;
 - (J) AAT GTC AGC;
 - (K) AAT GGC AGT;
 - (L) AAT TTC ACA;
 - (M) AAC CAA TCT;
 - (N) AAT TGT ACA;
 - (O) AAC AAT ACA;
 - (P) AAC ATT AGT;
 - (Q) AAT GCC ACT;
 - (R) AAT AAA ACA;
 - (S) AAT TCA ACA;
 - (T) AAT AGT ACT;
 - (U) AAT AGT ACT;
 - (V) AAT AGT ACT;
 - (W) AAT AAC ACT;